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Molex Connector Corporation
1120380025

For any questions, you can email us directly:
sales@integrated-circuit.com

The BradControl™ IP67 I/O modules provide a reliable solution for connecting industrial controllers to I/O devices in harsh environments.

22 Apr. 10
DW200584

PROFIBUS® Discrete I/O Modules

IP67 Classic 60mm Format

Features

- **NEW module version! 8 inputs + 8 universal (inputs or outputs)**
- **Classic design allows space savings for direct machine mount applications**
- **Standard M12 threaded connectors or BradConnectivity Ultra-Lock connection system**
- **Standard hole pattern allows for interchangeability with popular I/O modules**
- **Supports PNP and NPN inputs**
- **Choose from several I/O configurations**
- **Visible diagnostics through status LEDs**
- **Module and channel diagnostics supported through PROFIBUS**
- **Supports PROFIBUS Slave DP-V0 in accordance with EN 50170**

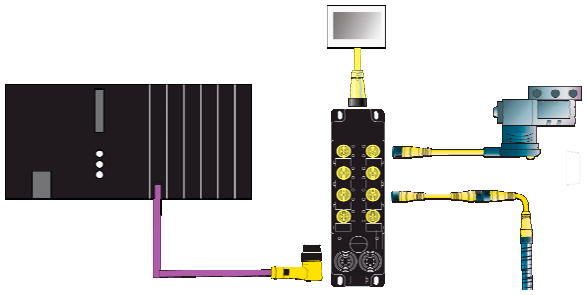
Typical Applications

- **Machine tool industry**
- **Material handling systems**
- **Filling & packaging**
- **Steel industry**

BradControl™

I/O Systems for Harsh Environments

The BradControl™ Classic 60mm I/O modules for PROFIBUS® provide a reliable solution for connecting industrial controllers to I/O devices in harsh environments.



Contained in a 60mm wide housing rated for IP67 environments, BradControl I/O modules can be machine mounted and are able to withstand areas where liquids, dust or vibration may be present. This makes them ideally suited for many applications including material handling equipment and automated assembly machinery.

To facilitate input and output device wiring BradControl Classic 60mm I/O modules accept standard threaded M12 connectors or BradConnectivity™'s new Ultra-Lock™ connection system, a "push-to-lock" method that provides a fast, simple and secure connection between the I/O module and I/O devices. With the BradConnectivity Ultra-Lock connection system, performance and reliability are designed right into the connector! The unique radial seal design provides a reliable, operator independent seal each and every time. There's no chance for under – or over-tightening. When you hear and feel the connector click, you know it's locked in – there's no guesswork.

Other features include the support of both PNP and NPN inputs and current sourcing outputs. Built-in diagnostic tools include the highly visible LEDs which provide maintenance personnel with the ability to easily determine I/O, module and network status.

PROFIBUS specific features include support of module and channel diagnostics through PROFIBUS and PROFIBUS Slave DP-V0 in accordance with EN 50170.

Woodhead

PROFIBUS® I/O Module

LED Indicators

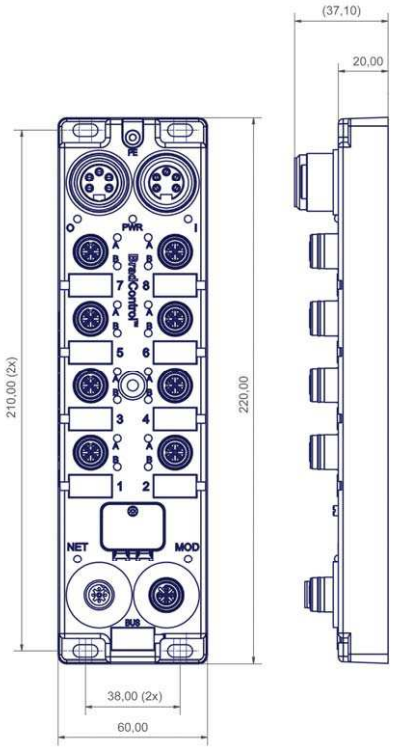
PROFIBUS Network Status (NET):
Green – running
Red – device not configured

I/O Module Diagnostics (MOD):
Off – no fault
Red – fault

Module & Input Power (I):
Green – external supply present

Output Power (O):
Green – external supply present

Input / Output (M12: 1A to 8B):
Green – input / output on
Red – input / output fault



Technical Information

I/O Configurations	16 inputs 14 inputs + 2 outputs 12 inputs + 4 outputs 8 inputs + 8 outputs 8 inputs + 8 configurable (inputs or outputs)
I/O Connectors	5-pole female M12 BradConnectivity™ Ultra-Lock™. Allows 2 input or 2 output channels per connector.
Bus Connectors	Bus in : male reverse-key M12 5-pole, B-Coded Bus out : female reverse-key M12 5-pole, B-Coded
Power Connectors	Power in : male Mini-Change® 5-pole Power out : female Mini-Change 5-pole
External Power Requirements	Module & input power : 24 Vdc, device current + module Output power : 24 Vdc (13 to 28 V), 8A max per module
Baud Rate Settings	Auto baud, All PROFIBUS® baud rates up to 12 MBaud
Address Settings	1 – 99 by rotary switches, (0 = factory default of 126) or 1 – 125 by Set_Slave_Address command
Input Type	Compatible with dry contact and PNP or NPN 3-wire switches. Electronic short circuit protection
Input Delay	0.5 ms
Input Device Supply	140 mA per port at 25°C
Output Load Current	Max 2.0 A per channel, electronic short circuit protection
Maximum Switching Frequency	200 Hz
Housing Dimensions	60mm x 220mm x 20mm (2.36 x 8.66 x .78 inches)
Mounting Dimensions	37.5 mm (1.48 inches) horizontal on centers 210 mm (8.27 inches) vertical on centers Center hole
Operating Temperature	-25ºC to 70ºC (-13ºF to 158ºF)
Storage Temperature	-25ºC to 90ºC (-13ºF to 194ºF)
RH Operating	5 to 95% non-condensing
EMC	IEC 61000-6-2
Protection	IP67 according to IEC 60529
Vibration	IEC 60068-2-6 conformance
Shock	10G, 11ms, 3 axis
Input Signal Voltage	"0": -0.2 ↔ 5 Volts / "1": 10 ↔ 28 Volts
Output Voltage	Supply value less 1 Volt.
Approvals	CE, UL, CUL, PNO certification

Ordering Information

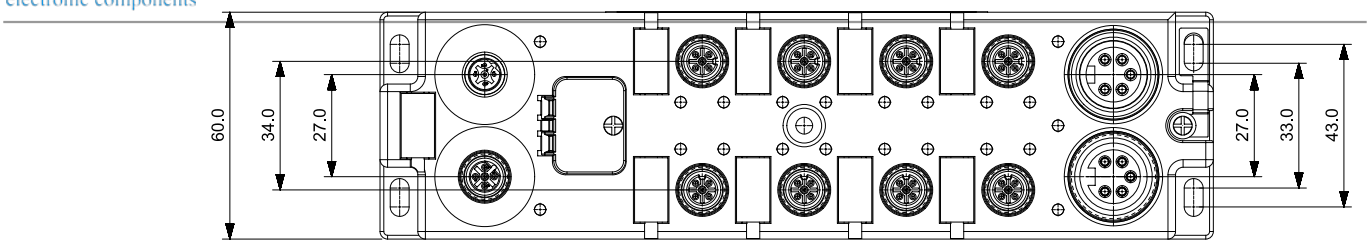
Part Number	SAP Number	Product Description
TCDPB-8D0N-B1U	1120380030	8 Port M12 – 16 inputs NPN
TCDPB-8C2N-B1U	1120380028	8 Port M12 – 14 inputs NPN + 2 sourcing outputs
TCDPB-8B4N-B1U	1120380026	8 Port M12 – 12 inputs NPN + 4 sourcing outputs
TCDPB-888N-B1U	1120380024	8 Port M12 – 8 inputs NPN + 8 sourcing outputs
TCDPB-8D0P-B1U	1120380031	8 Port M12 – 16 inputs PNP
TCDPB-8C2P-B1U	1120380029	8 Port M12 – 14 inputs PNP + 2 sourcing outputs
TCDPB-8B4P-B1U	1120380027	8 Port M12 – 12 inputs PNP + 4 sourcing outputs
TCDPB-888P-B1U	1120380025	8 Port M12 – 8 inputs PNP + 8 sourcing outputs
TCDPB-88UP-B1U	1120385004	8 Port M12 – 8 inputs PNP + 8 I/O configurable

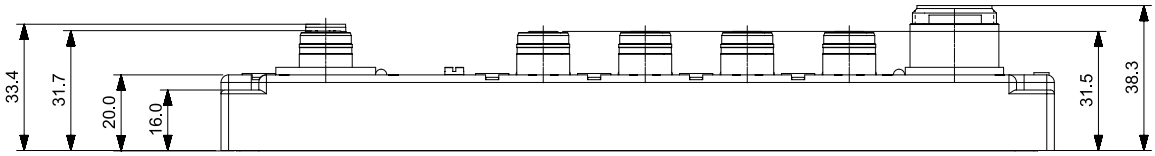
Active I/O Modules

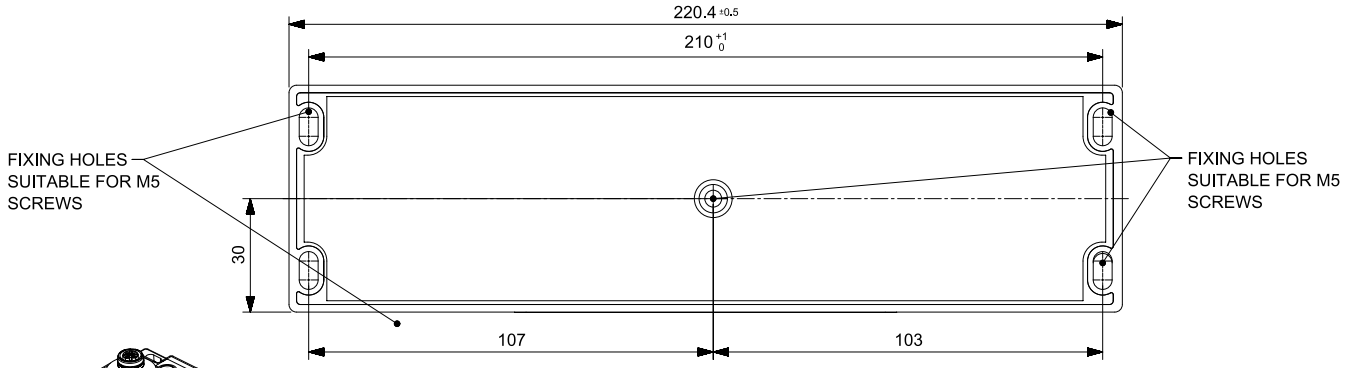
Brad® from molex

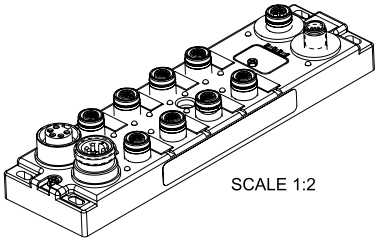
To contact us: www.woodhead.com

North America: US: +1 (630) 969-4550 – Canada: +1 519 725 5136
Europe: France: +33 2 32 96 04 20 – Germany: +49 7252 94 96 0 – Italy: +39 (02) 950551 – UK: +44 (1252) 720720
Asia: China: +86 21-5048-0889 Singapore: +65 6-268-6868 – Japan: +81 46-265-2325 – Korea: +82 31-492-9000









SCALE 1:2

RELEASE STATUS	RQ	RELEASE DATE	28.10.2015	17:28:47							

QUALITY SYMBOLS: = 0 (all)

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

EC NO: 101574 | DRWN: AAHLERS | CHK'D: | APPR: | REV: 2015/10/21

A1

GENERAL TOLERANCES (UNLESS SPECIFIED)

ANGULAR TOL ±	°
4 PLACES	±
3 PLACES	±
2 PLACES	±
1 PLACE	± 0,3
0 PLACES	± 0,5

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION UNITS	MM
SCALE	1:1
DRWN BY	ULETTENMEIER
DATE	2015/01/19
CHK'D BY	
DATE	
APPR BY	RSILLER
DATE	2015/06/25
DRAWING SIZE	A3
THIRD ANGLE PROJECTION	

molex

DBO PB 60 MM 7/8" 5P AC MA FE U12 5P 8PT
AC FE U12 5P 2PT BC

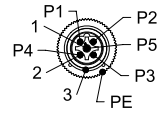
PRODUCT CUSTOMER DRAWING

SERIES	MATERIAL NUMBER	CUSTOMER
112038	SEE TABLE 1	GENERAL MARKET

DOCUMENT NUMBER	DOC TYPE	DOC PART	SHEET NUMBER
1120380030	PSD	000	1 OF 3

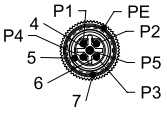
A	B	C	D
BUS IN:	BUS OUT:	INPUTS / OUTPUTS:	POWER IN / POWER OUT
1x MALE M12 5P B-CODE	1x FEMALE M12 5P B-CODE	8x FEMALE M12 5P A-CODE	MALE 7/8" 5PIN / FEMALE 7/8" 5PIN

SCALE 1:1



WIRING INFORMATION
1 - +5 VDC (Bus Power)
2 - Bus A
3 - 0 V (Ground)
4 - Bus B
5 - NC

SCALE 1:1



WIRING INFORMATION
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2 - Bus A
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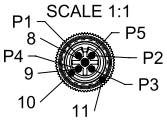
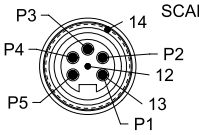
SCALE 1:1

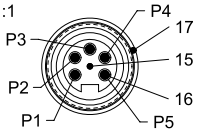


WIRING INFORMATION
P1 - +24 VDC
P2 - B Input / Output
P3 - 0 V (Ground)
P4 - A Input / Output
P5 - PE (Protected Earth)

SCALE 1:1



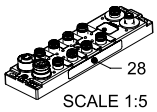
SCALE 1:1



WIRING INFORMATION
P1 - 0 V (Ground)
P2 - 0 V (Ground)
P3 - PE (Protected Earth)
P4 - 24 VDC (Module and Inputs Power)
P5 - 24 VDC (Outputs Power)

BILL OF MATERIAL

ITEM	DESCRIPTION	MATERIAL	FINISH
1	INSERT	TPU	BLACK
2	CONTACT	COPPER ALLOY	NICKEL PLATET
3	SHELL	BRASS	NICKEL PLATET
4	INSERT	TPU	BLACK
5	GASKET	FPM	RED
6	CONTACT	COPPER ALLOY	NI AU
7	SHELL	BRASS	NI
8	INSERT	TPU	BLACK
9	CONTACT	COPPER ALLOY	NI AU
10	GASKET	FPM	RED
11	SHELL	BRASS	NI
12	INSERT	TPE	YELLOW
13	CONTACT	COPPER ALLOY	NI AU
14	SHELL	BRASS	NI
15	INSERT	TPE	YELLOW
16	CONTACT	COPPER ALLOY	NI AU
17	SHELL	BRASS	NI
18	HOUSING	PBT	BLACK
19	WINDOW	PC	TRANSPARENT
20	SCREW	V2A	V2A
21	LABEL	PC	WHITE
22	FIBER OPTIC	PA	TRANSPARENT
23	WASHER	BRASS	NI
24	SCREW	V2A	V2A
25	SHIELD PLATE	STAINLESS STEEL	STAINLESS STEEL
26	RESIN	EPOXY	TRANSPARENT
27	LABEL	PVC	WHITE
28	LABEL	PVC	YELLOW



SCALE 1:5

RELEASE STATUS | RQ | RELEASE DATE | 28.10.2015 | 17:28:47

QUALITY SYMBOLS

EC NO:	101574
DRWN:	AAHLERS
CHK'D:	
APPR:	
REV	A1

GENERAL TOLERANCES (UNLESS SPECIFIED)

ANGULAR TOL ±	°
4 PLACES	±
3 PLACES	±
2 PLACES	±
1 PLACE	± 0,3
0 PLACES	± 0,5

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION UNITS	MM
SCALE	1:1
DRWN BY	ULETTENMEIER
DATE	2015/01/19
CHK'D BY	
DATE	
APPR BY	RSILLER
DATE	2015/06/25
DRAWING SIZE	A3
	THIRD ANGLE PROJECTION

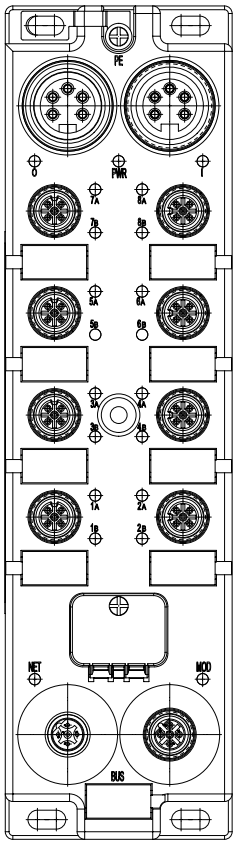
molex

DBO PB 60 MM 7/8" 5P AC MA FE U12 5P 8PT
AC FE U12 5P 2PT BC

PRODUCT CUSTOMER DRAWING

SERIES	MATERIAL NUMBER	CUSTOMER
112038	SEE TABLE 1	GENERAL MARKET

DOCUMENT NUMBER	DOC TYPE	DOC PART	SHEET NUMBER
1120380030	PSD	000	2 OF 3



UNIVERSAL PRINTING

TABLE 1 UNIVERSAL PRINTING

POWER TYPE	INPUT / OUTPUT		ENG.NO.	MOLEX P/N	3D MODEL NO.
7/8" 5 POLE	NPN	16I	TCDPB-8D0N-B1U	1120380030	1120380030 (PDM)
		14I / 20	TCDPB-8C2N-B1U	1120380028	
		12I / 40	TCDPB-8B4N-B1U	1120380026	
		8I / 80	TCDPB-888N-B1U	1120380024	
	USER CONFIG.		TCDPB-8YYX-B1U	1120385005	
	PNP	16I	TCDPB-8D0P-B1U	1120380031	
		14I / 20	TCDPB-8C2P-B1U	1120380029	
		12I / 40	TCDPB-8B4P-B1U	1120380027	
		8I / 80	TCDPB-888P-B1U	1120380025	

QUALITY SYMBOLS
= 0
= 0
= 0
= 0
= 0
= 0
= 0
= 0

EC NO: 101574 2015/10/21
DRWN: AAHLERS
CHK'D:
APPR:
REV: A1

GENERAL TOLERANCES (UNLESS SPECIFIED)
ANGULAR TOL ± °
4 PLACES ±
3 PLACES ±
2 PLACES ±
1 PLACE ± 0,3
0 PLACES ± 0,5
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION UNITS: MM
SCALE: 1:1
DRWN BY: ULETTENMEIER DATE: 2015/01/19
CHK'D BY: DATE:
APPR BY: RSILLER DATE: 2015/06/25
DRAWING SIZE: A3
THIRD ANGLE PROJECTION

molex

DBO PB 60 MM 7/8" 5P AC MA FE U12 5P 8PT
AC FE U12 5P 2PT BC

PRODUCT CUSTOMER DRAWING

SERIES	MATERIAL NUMBER	CUSTOMER
112038	SEE TABLE 1	GENERAL MARKET

DOCUMENT NUMBER	DOC TYPE	DOC PART	SHEET NUMBER
1120380030	PSD	000	3 OF 3

RELEASE STATUS	RQ	RELEASE DATE	28.10.2015 17:28:47